

Somerville Climate Forward
Natural Systems Working Group Meeting
5/15/2018

Attendance

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Tree Canopy

- Grant to complete an Urban Forestry Management Plan was recently awarded by DCR.
- Create online dashboard for tree canopy to publicly track and share data. Include tree inventory, canopy cover, etc.
- Run some mini-experiments to demonstrate cooling benefits of trees. Test pilot street one with trees and one where there are fewer trees and track how temperatures diverge over time.
 - Cambridge collected data on streets on 90 degree day to show difference
- Mystic River Watershed Association (MyRWA) is working with City of Somerville on volunteer tree planting program. One challenge is to change perception of trees when people don't want them near their property. Volunteers knocked on 15 doors and only 3 people want trees outside of their house. Need to convince people that trees have value. People will respond to different messages: some will respond to data, some to stories, some to property value, etc.
- What should Somerville's target tree canopy be?
 - Boston's goal is 35%, but they have larger areas of open space/park which contribute to a higher percentage.
 - Rough calculations of Somerville's canopy today: tree coverage = 18-20 % (very rough estimates).
 - Cambridge and Boston have somewhere around 27-28% coverage today.
 - Increasing to 30% is not feasible – especially in the near term.
 - Would need to plant 8,000 to increase canopy by 1% in 10 years. Canopy increases over time as trees grow, but still would require a lot of new tree planting.
 - Don't have tree count data for private property—tree canopy data is for the entire city including private trees. Canopy goals are dependent on private tree planting and management, so need to be aware of that aspect when setting a goal.

- Tree canopy cover should be tied to equity – focus should be on adding canopy where there isn't a lot of canopy now and in areas with more vulnerable populations.
- Think about how to build layers of vegetation – Use park space to get more vertical layers of plants that will support overall cooling. Trees are a tool to address climate, but other vegetation measures matter too. For example, putting in planter boxes on streets or public spaces that can beautify spaces and help with stormwater management.
- Planted 60 trees in East Somerville and Ten Hills – will be putting tags with ecosystem benefits on them.
- Future action: Adopt-a-Tree program. Cambridge has an adopt-a-tree program where kids water trees. Program has varying success. Adopt a tree program is a good idea if we can find collaborators to manage it – city staff don't have time right now.
- New Haven example is focused on volunteers. Volunteer tree planting is a lot of work and still needs assistance from DPW. If there is money – easier to do it within the city. Volunteers should primarily help with private tree planting and maintenance.
 - Vanessa likes the aspect of the New Haven program where maintenance is committed to.
 - Tufts student is working on a grant program that employs recently incarcerated people and people in recovery to maintain trees. Possibility for collaboration?
 - Keep city working on public trees and volunteers focusing on private trees.
 - Can City issue mini-grants for tree planting? CPA funding model.
- Focus on what the city does really well and draw on partners for help with things they do better. For example, MyRWA is good at mobilizing volunteers, not cutting sidewalk for planting trees. Build on strengths.
- Typically costs \$1000/tree to install public tree.
- Didn't get a sense of the main barriers of achieving a tree goal in the write-up. The overall goal should be to add more trees and not lose the trees we have. What is the main thing standing in the way?
 - All of the above: limited space, money, time, staff, etc. There is not enough room on the sidewalks for 8000 new trees (maybe 1000).
- Tier 2 – green roofs should be included if we are limited on space. Need to think of other ways to cool the city.
- How to change perception of street trees:
 - When you involve residents then they have an investment in the tree if they plant it.
 - People don't want tree outside their house for many reasons, including limited sunlight into homes, worried about roots causing damage, no city program to help with costs if roots get into foundation, branches are dangerous, squirrels, and more.
 - Diffusion of innovation – you learn from people who are like you that are already doing it. How do we apply this model to the urban forest?
 - Training and working with neighbors on how they do things in their own yards, changes perception over time.
 - Need to build up the group of residents that support trees.

- Could benefit from effective marketing – “sticker” or sign outside of their house if they have a tree that they help maintain.
- Lisa B – There was a tree champion program when she was environmental coordinator for the city. Signs can be effective
- Buy-in: citizen-science can help, identifying tree species helps people like them more. Sharing data about the trees, phenology, growth, etc. could get some people to care more.
- Give people the opportunity to name a tree if they are adopting it.
 - Tree inventory can be a tool to engage people online. Need to have not-online options too, like physical labels on certain trees.
 - Continue to make the videos explaining decisions about trees.
- Pollinators could be selling point.
- Air quality improvement is big selling point of trees, especially near 93.
- Arlington provides discounted trees to homeowners. City delivers trees. Program for private trees.
 - Somerville Growing Center sells trees at affordable price each year.
- Create test where you can show that you can really cool down a street with trees and landscaping.
- Universities are a resource – many students would love to participate in programs.
 - Tufts calls and wants to volunteer every year.
- Hire youth through Somerville Youth Employment program to water trees (possibly on bikes).

Flooding

- Graphics could help convey what these interventions might look like. There are good examples of possible shoreline treatments from NYC plan.
 - Fresh Pond graphics from Cambridge have been effective.
- Collaborative work takes a lot time and this is really important
 - What are the specific things that need to be done?
- Restoration of ecosystems
 - Can't de-engineer our 200 year engineered watershed, but should make decisions with ecosystem benefits in mind.
- Bridge upstream of AED – doesn't seem viable for flood protection. How would this be engineered? Don't see how we can turn a bridge into a dam.
- Adding another dam doesn't make sense due to the enormous infrastructure cost and very long time required for planning and construction (20-30 years)
 - Typically you don't build two dams next to each other. Need to understand why this is a proposed option and what it would do.
 - Should focus on primary (existing) dam and the supporting infrastructure around it.
 - Preference to accept and direct water to certain areas rather than to build more walls/dams.

- Regional approach is mostly about process and governance. Should only be assessing the interventions after the coalition is created. Convene coalition first before you do the research. The technical work should answer questions that are be asked by the coalition. The members of the coalition need to trust the research and work that is being done.
- Good that social equity is a part of this.
- Precedent examples are of outcomes—not about the process. That’s not the important thing with this solution. What are examples of regional governance or regional studies? The building of the infrastructure is not the main challenge here.
- Add to short term – assessment of stakeholders and why they need to be involved. Who gets to be at the table?
- Look at Yale Climate Communication Center for guidance on communication.

Tier 2 Solutions

- Home rule challenges – Solutions to climate change are cross-jurisdiction, how do we share resources to finance work that may need to be done in other jurisdiction (i.e. how can funds be shared with Woburn to do upstream stormwater management to reduce risk downstream in Cambridge/ Somerville/ Medford)?